

ABSTRACT

The shape of a three-dimensional object is determined from uncalibrated stereo images by first determining the projection of the point on a reference plane. The distance of each point from the reference plane is obtained by a technique that makes use of a calibration based on two known points visible in each camera's field of view. The method requires only one high precision measurement, which is the depth of the two calibration points from a reference plane. These may be supplied in a setup apparatus thereby avoiding the need for a user to make measurements. The rest of the required calibration data may be derived directly from the images of the cameras.

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